

## CLAIMS

What is claimed is:

1. A recording medium type discriminating apparatus, comprising:
  - a radio frequency (RF) amplifier to output a signal based on light reflected from a recording medium;
  - a wobble amplitude detector to detect an amplitude of a wobble formed on the recording medium based on an output signal of the RF amplifier; and
  - a system controller to discriminate a recording medium type of the recording medium by comparing the wobble amplitude with a reference value.
2. The apparatus of claim 1, wherein the RF amplifier detects a push-pull signal by determining an amount of the reflected light and provides the detected push-pull signal to the wobble amplitude detector.
3. The apparatus of claim 2, wherein the wobble amplitude detector detects a peak-to-peak value of the output signal of the RF amplifier and identifies the detected peak-to-peak value as the wobble amplitude.
4. The apparatus of claim 1, wherein the wobble amplitude detector detects a peak-to-peak value of the output signal of the RF amplifier and identifies the detected peak-to-peak value as the wobble amplitude.
5. The apparatus of claim 1, wherein the system controller determines that the recording medium is a DVD(+) type recording medium when the wobble amplitude is higher than the reference value and that the recording medium is a DVD(-) type recording medium when the wobble amplitude is not higher than the reference value.
6. The apparatus of claim 1, wherein the reference value is about 16 nm.
7. The apparatus of claim 1, wherein the reference value is less than 18 nm.
8. The apparatus of claim 1, wherein the reference value is greater than 14 nm.

9. A recording medium type discriminating apparatus, comprising:  
a radio frequency (RF) amplifier to output a signal based on light reflected from the recording medium;  
an automatic gain controller (AGC) to control an amplitude gain of the output signal of the RF amplifier so that the output signal of the RF amplifier has a constant level; and  
a system controller to discriminate a recording medium type of recording medium by comparing a gain value used in the AGC with a reference value.

10. The apparatus of claim 9, wherein the RF amplifier detects a push-pull signal by determining an amount of the reflected light and provides the detected push-pull signal to the AGC.

11. The apparatus of claim 9, wherein the system controller monitors the gain value of the AGC and determines that the recording medium is a DVD(-) type recording medium when the gain value is higher than the reference value and that the recording medium is a DVD(+) type recording medium when the wobble amplitude is not higher than the reference value.

12. The apparatus of claim 9, wherein the reference value is about 16 nm.

13. The apparatus of claim 9, wherein the reference value is less than 18 nm.

14. The apparatus of claim 9, wherein the reference value is greater than 14 nm.

15. A recording medium type discriminating method, comprising:  
detecting an amplitude of a wobble formed on a recording medium using light reflected from the recording medium; and  
discriminating a recording medium type of the recording medium by comparing the detected wobble amplitude with a reference value.

16. The method of claim 15, wherein the discrimination of the recording medium type of the recording medium includes determining that the recording medium is a DVD(+) type recording medium when the amplitude of the wobble is higher than the reference value and that the recording medium is a DVD(-) type recording medium when the amplitude of the wobble is not higher than the reference value.

17. The method of claim 16, wherein the detection of the amplitude of the wobble includes detecting a peak-to-peak value of a detected RF (radio frequency) signal, corresponding to an amount of light reflected from the recording medium, and identifying the amplitude of the wobble as being the peak-to-peak value.

18. The method of claim 15, wherein the detection of the amplitude of the wobble includes detecting a peak-to-peak value of a detected radio frequency (RF) signal, corresponding to an amount of light reflected from the recording medium, and identifying the amplitude of the wobble as being the peak-to-peak value.

19. The method of claim 15, wherein the reference value is about 16 nm.

20. The method of claim 15, wherein the reference value is less than 18 nm.

21. The method of claim 15, wherein the reference value is greater than 14 nm.

22. A recording medium type discriminating method, comprising:  
automatically controlling an amplitude gain value of a radio frequency (RF) signal detected using light reflected from a recording medium so that an amplitude of the RF signal has a constant level; and  
discriminating a recording medium type of the recording medium by comparing the amplitude gain value with a reference value.

23. The method of claim 22, wherein the discrimination of the recording medium type of the recording medium includes monitoring the amplitude gain value and determining that the recording medium is a DVD(-) type recording medium when the gain value is higher than the reference value and that the recording medium is a DVD(+) type recording medium when the wobble amplitude is not higher than the reference value.

24. The method of claim 22, wherein the reference value is about 16 nm.

25. The method of claim 22, wherein the reference value is less than 18 nm.

26. The method of claim 22, wherein the reference value is greater than 14 nm.

27. A medium comprising a computer readable code to control a computer to perform recording medium type discrimination, including at least:

detecting an amplitude of a wobble formed on a recording medium using light reflected from the recording medium; and

discriminating a recording medium type of the recording medium by comparing the detected wobble amplitude with a reference value.

28. The medium of claim 27, wherein the discrimination of the recording medium type of the recording medium includes determining that the recording medium is a DVD(+) type recording medium when the amplitude of the wobble is higher than the reference value and that the recording medium is a DVD(-) type recording medium when the amplitude of the wobble is not higher than the reference value.

29. The medium of claim 28, wherein the detection of the amplitude of the wobble includes detecting a peak-to-peak value of a detected RF (radio frequency) signal, corresponding to an amount of light reflected from the recording medium, and identifying the amplitude of the wobble as being the peak-to-peak value.

30. The medium of claim 27, wherein the detection of the amplitude of the wobble includes detecting a peak-to-peak value of a detected radio frequency (RF) signal, corresponding to an amount of light reflected from the recording medium, and identifying the amplitude of the wobble as being the peak-to-peak value.

31. The medium of claim 27, wherein the reference value is about 16 nm.

32. The medium of claim 27, wherein the reference value is less than 18 nm.

33. The medium of claim 27, wherein the reference value is greater than 14 nm.

34. A medium comprising a computer readable code to control a computer to perform recording medium type discrimination, including at least:

automatically controlling an amplitude gain value of a radio frequency (RF) signal detected using light reflected from a recording medium so that the amplitude of the RF signal can have a constant level; and

discriminating a recording medium type of the recording medium by comparing the amplitude gain value with a reference value.

35. The medium of claim 34, wherein the discrimination of the recording medium type of the recording medium includes monitoring the amplitude gain value and determining that the recording medium is a DVD(-) type recording medium when the gain value is higher than the reference value and that the recording medium is a DVD(+) type recording medium when the wobble amplitude is not higher than the reference value.

36. The medium of claim 34, wherein the reference value is about 16 nm.

37. The medium of claim 34, wherein the reference value is less than 18 nm.

38. The medium of claim 34, wherein the reference value is greater than 14 nm.